

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059499

Luminaire Tested: S123RDR-H1165D835-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059499
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D835-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

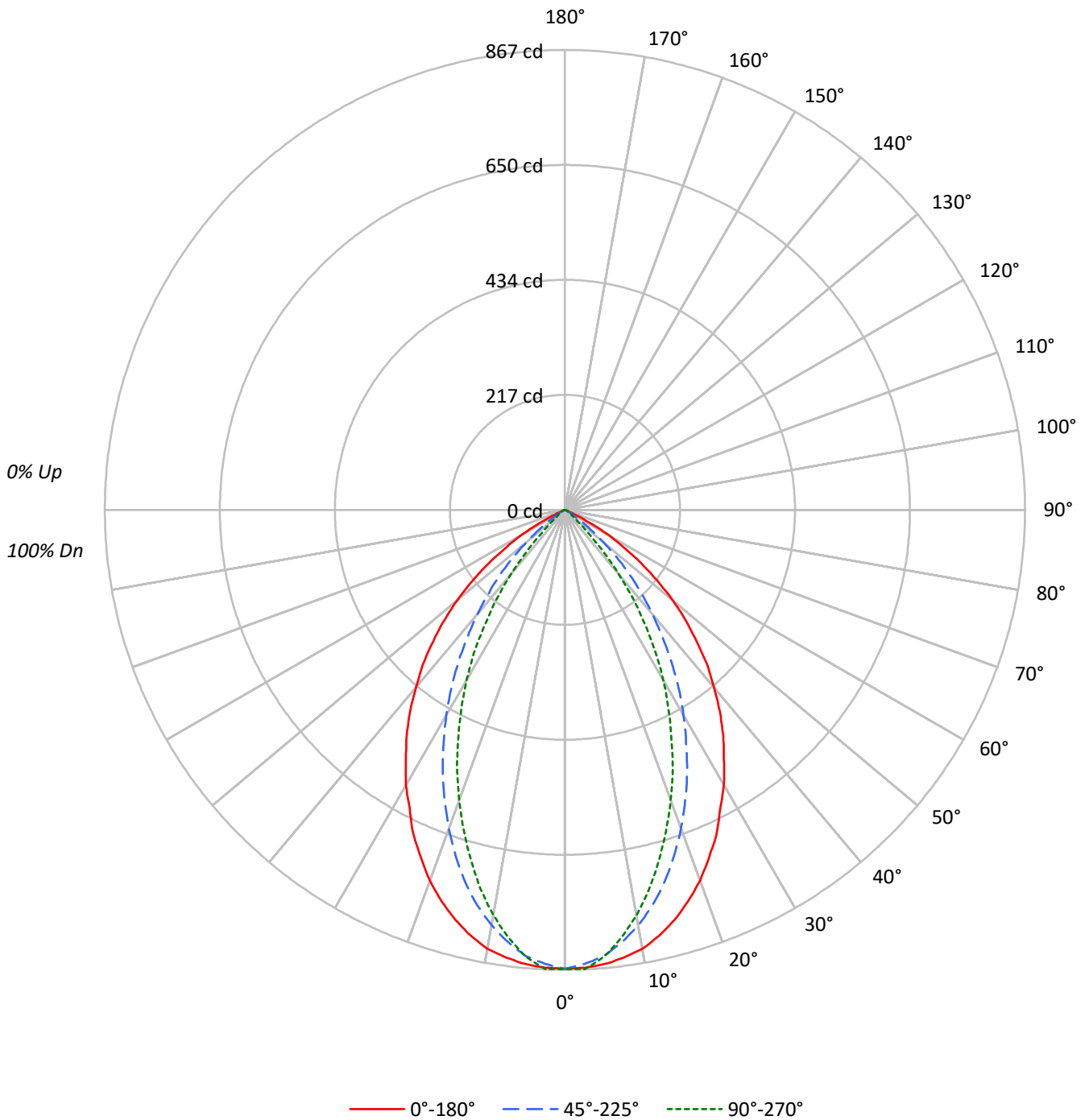
Lumens per Lamp: N/A
Luminaire Lumens: 987.3 lumens
Efficiency: N/A
Efficacy: 27.0 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10160	10160	10160
5°	10132	9952	9969
10°	10017	9485	9253
15°	9722	8825	8316
20°	9297	7991	7278
25°	8755	7059	6156
30°	8123	6064	5025
35°	7450	5013	3734
40°	6685	3930	2391
45°	5830	2870	995
50°	4836	1704	382
55°	3566	712	285
60°	2161	261	164
65°	581	156	78
70°	0	48	48
75°	0	0	64
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5830 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.7	8.1
10°-20°	205.6	20.8
20°-30°	256.2	25.9
30°-40°	229.1	23.2
40°-50°	144.6	14.6
50°-60°	60.5	6.1
60°-70°	11.4	1.2
70°-80°	0.4	0.0
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	541.4	54.8
0°-40°	770.5	78.0
0°-60°	975.5	98.8
0°-90°	987.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	987.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	865	865	865	865	865	
5°	860	858	844	847	846	81
15°	800	780	726	695	684	224
25°	676	621	545	497	475	309
35°	520	444	350	287	260	324
45°	351	273	173	92	60	271
55°	174	120	35	14	14	156
65°	21	15	6	3	3	29
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	865.2	865.2	865.2	865.2	865.2
2.5°	863.8	865.2	856.8	865.2	866.6
5°	859.6	858.2	844.3	847.1	845.7
7.5°	851.3	847.1	822.0	816.4	813.7
10°	840.1	829.0	795.5	781.6	776.0
12.5°	822.0	806.7	763.5	741.2	732.8
15°	799.7	780.2	725.9	695.2	684.1
17.5°	773.2	745.4	684.1	650.6	633.9
20°	744.0	705.0	639.5	599.1	582.4
22.5°	709.2	666.0	592.1	548.9	530.8
25°	675.7	621.4	544.8	497.4	475.1
27.5°	633.9	576.8	494.6	445.8	422.2
30°	599.1	533.6	447.2	392.9	370.6
32.5°	557.3	489.0	398.5	338.6	317.7
35°	519.7	444.4	349.7	287.0	260.5
37.5°	479.3	401.3	300.9	235.5	210.4
40°	436.1	358.1	256.4	183.9	156.0
42.5°	397.1	314.9	211.8	136.5	108.7
45°	351.1	273.1	172.8	92.0	59.9
47.5°	309.3	234.1	131.0	51.5	32.0
50°	264.7	193.7	93.3	26.5	20.9
52.5°	218.7	154.6	61.3	18.1	16.7
55°	174.2	119.8	34.8	13.9	13.9
57.5°	131.0	86.4	18.1	11.1	9.8
60°	92.0	57.1	11.1	8.4	7.0
62.5°	52.9	33.4	8.4	5.6	5.6
65°	20.9	15.3	5.6	2.8	2.8
67.5°	1.4	4.2	2.8	1.4	1.4
70°	0.0	0.0	1.4	1.4	1.4
72.5°	0.0	0.0	1.4	1.4	1.4
75°	0.0	0.0	0.0	0.0	1.4
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	13.25	14.42	13.61	14.74	15.05	0.00	0.00	0.00	0.00	0.07
	3H	13.09	14.12	13.47	14.45	14.82	0.00	0.00	0.00	0.00	0.00
	4H	13.00	13.96	13.41	14.31	14.69	0.00	0.00	0.00	0.00	0.00
	6H	12.91	13.78	13.33	14.15	14.55	0.00	0.00	0.00	0.00	0.00
	8H	12.86	13.68	13.29	14.07	14.48	0.00	0.00	0.00	0.00	0.00
	12H	12.81	13.59	13.24	13.98	14.41	0.00	0.00	0.00	0.00	0.00
4H	2H	13.01	13.96	13.41	14.31	14.70	0.00	0.00	0.00	0.00	0.17
	3H	12.84	13.61	13.26	14.02	14.42	0.00	0.00	0.00	0.00	0.05
	4H	12.74	13.42	13.17	13.84	14.29	0.00	0.00	0.00	0.00	0.00
	6H	12.64	13.22	13.11	13.67	14.14	0.00	0.00	0.00	0.00	0.00
	8H	12.57	13.12	13.05	13.57	14.04	0.00	0.00	0.00	0.00	0.00
	12H	12.52	12.99	13.01	13.48	13.96	0.00	0.00	0.00	0.00	0.00
8H	4H	12.57	13.12	13.05	13.57	14.04	0.00	0.00	0.00	0.00	0.00
	6H	12.46	12.90	12.96	13.40	13.88	0.00	0.00	0.00	0.00	0.00
	8H	12.39	12.78	12.91	13.30	13.80	0.00	0.00	0.00	0.00	0.00
	12H	12.33	12.68	12.85	13.18	13.76	0.00	0.00	0.00	0.00	0.00
12H	4H	12.52	12.99	13.01	13.48	13.96	0.00	0.00	0.00	0.00	0.00
	6H	12.39	12.78	12.91	13.30	13.80	0.00	0.00	0.00	0.00	0.00
	8H	12.33	12.68	12.85	13.18	13.76	0.00	0.00	0.00	0.00	0.00